Interagency Domestic Heroin Threat Assessment

Product No. 2000-R0345-001 February 2000

National Drug Intelligence Center
Johnstown, Pennsylvania

U.S. Department of Justice
National Drug Intelligence Center

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National Drug Intelligence Center
Drug Enforcement Administration
Federal Bureau of Investigation
United States Customs Service

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Interagency Domestic Heroin Threat Assessment

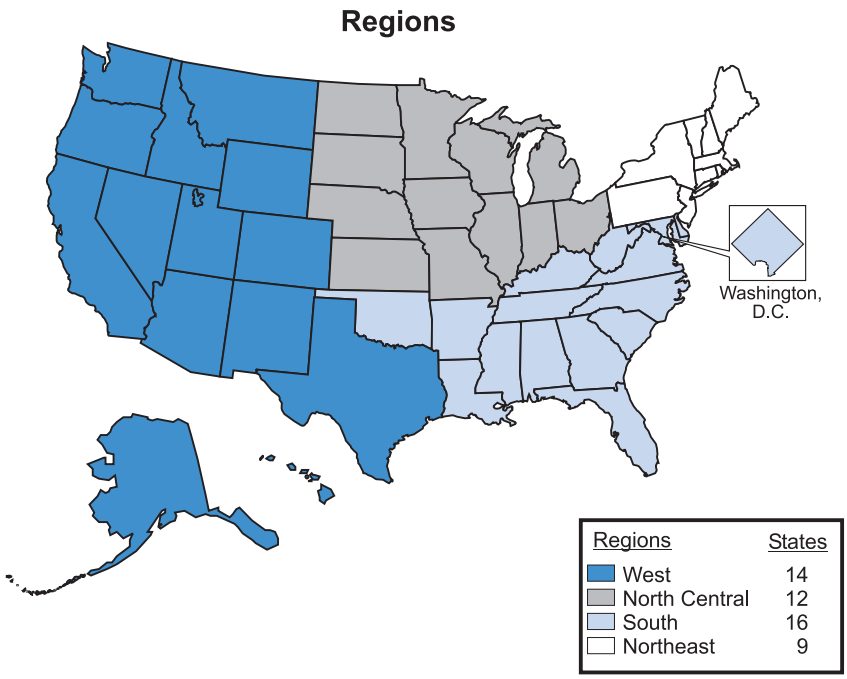
Scope

The Global Heroin Threat Assessment domestic team was tasked with assessing the current heroin threat to the United States. The assessment was to focus primarily on identifying heroin trends affecting both the demand by users and the supply by producers and distributors. Although the focus of the study was to be on current trends and patterns, the domestic team reviewed data covering the past 4 to 5 years.

On the demand side, critical tasks included estimating the number of hardcore users, identifying patterns of heroin abuse, and developing a model to estimate domestic heroin consumption. On the supply side, the team was tasked with identifying the domestic availability of heroin and the source regions from which the heroin is supplied.

Secondarily, the domestic team was tasked with identifying enabling factors that facilitate heroin use and supply in the United States, as well as any serious intelligence gaps that preclude the development of an accurate assessment.

The analysis divides the United States into four regions to coincide with heroin epidemiologic studies.



Demand indicators used in this report include the 1998 Monitoring the Future Study, 1998 National Parents' Resource Institute for Drug Education Study, 1998 National Household Survey on Drug Abuse, 1998 Arrestee Drug Abuse Monitoring Program Report, year-end 1997 Drug Abuse Warning Network Emergency Department Data, 1996 DAWN Annual Medical Examiner Data, 1997 Treatment Episode Data Set, and 1999 Community Epidemiology Work Group Reports (see Appendix A). For each source, the most current data available were used.

For the supply-side issues, a wide range of Federal, State, and local law enforcement data were used. Open-source information and personal interviews augmented the law enforcement data.

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The Heroin Situation in the United States

Heroin use in the United States has historically gone through periods of rising and falling consumption. There are some indications, based on demand data, that the rate of use has stabilized at high levels. Since the early 1990s, not only has nationwide heroin use increased in terms of the total number of users, but also use patterns have changed. Heroin has spread from traditional markets in the inner city into wealthier suburbs and smaller cities and towns across the country. Particularly worrisome is the increase in the numbers of young people trying heroin, potentially developing a new addict population. The combination of higher heroin purity, lower prices, and ready availability has brought an increase in the number of new, younger users. These users are attracted by the purer heroin now available, which can be smoked effectively or snorted instead of being injected.

The most recent estimate of the domestic hardcore addict population in the United States is 980,000. This figure was derived from data in a 1999 study sponsored by the Office of National Drug Control Policy that was designed to determine the expenditure habits of hardcore drug users in the United States. Another estimate, extrapolated from data on overdose deaths, number of applicants for treatment, and number of heroin addicts arrested, places the heroin addict population between 750,000 and 1,000,000.[1]

Annual heroin consumption is impossible to calculate precisely because of the high degree of variability in patterns of use as well as the imprecision of available data, particularly addict populations, dosage levels, and frequency of use. However, use of a consumption-based equation that uses data derived from drug treatment and law enforcement sources yields a realistic estimate of heroin consumption at 18 metric tons (see Appendix B).

Heroin comes from four different producing areas and is readily available across the United States. Until the early 1990s, heroin in the United States came primarily from Mexico and Southeast Asia and, to a lesser extent, from Southwest Asia. Since then, South American heroin has captured a large share of the domestic heroin market. Concurrent with the introduction of South American

1. Joel G. Hardman, Alfred Goodman Gilman, and Lee T. Limbird, eds., *Goodman & Gilman's The Pharmacological Basis of Therapeutics*, 9th ed. (New York: McGraw Hill, 1996), 567.

heroin in the early 1990s has been a significant rise in purity and a decrease in price.

South American heroin holds the largest market share in the Northeast and South Regions. It continues to be the dominant type of heroin purchased in the eastern portion of the United States and analyzed through the Drug Enforcement Administration Domestic Monitor Program and Heroin Signature Program (see Appendixes C and D). Mexican heroin is the heroin of choice in the West Region and in select cities in the North Central Region. However, Southeast Asian heroin remains readily available in the North Central Region and available in the Northeast and South Regions of the United States. Southwest Asian heroin also is available in select markets across the country.

Enabling Factors

A large number of enabling factors affect both the demand for and supply of heroin in the United States. On the demand side, the increased and ready availability of heroin—bolstered by the entry of South American heroin into the market—and the accompanying increase in purity and decrease in price have tempted more users to experiment with the drug, raising the potential for addiction. This temptation is compounded by the concept of "generational forgetting," which fosters a perception of decreased risk of addiction.

On the supply side, a number of enabling factors continue to facilitate the smuggling of heroin across our borders. The challenges in monitoring huge volumes of cargo generated by U.S. trade are exacerbated by long, porous borders with Mexico and Canada, multiple ports of entry, and a shortage of law enforcement and U.S. Customs Service (USCS) inspection resources. The astronomical number of ocean containers, air cargo, and vehicular traffic entering the country on a daily basis makes interdiction of specific heroin shipments almost impossible without accurate prior intelligence.

The financial lure of heroin trafficking is great. While heroin can be purchased relatively inexpensively outside the United States, the price increases significantly once it reaches domestic shores. Sometimes heroin is purchased at a low price in a foreign country and later exchanged or "swapped" for other drugs (such as cocaine), which are then sold in other foreign markets for higher profits.

Drug trafficking organizations are employing established drug distribution networks and creative marketing techniques to expand the heroin market in the United States. For example, there have been instances of Colombian criminal enterprises giving free samples of heroin to cocaine buyers in order to lure new customers.

Mexican trafficking organizations have employed similar techniques to develop new markets for Mexican heroin. Using established marijuana networks, they have expanded their product line to include black tar and brown heroin. Mexican trafficking organizations have attempted to produce a white powder heroin. If they are successful, their already established marketing techniques and distribution networks could greatly facilitate the expansion of this new product line.

The growing alliance between Nigerian trafficking organizations and African-American gangs—particularly in Chicago, Los Angeles, Milwaukee, and Minneapolis—is also of concern. Nigerian traffickers work closely with street gangs such as the Gangster Disciples, allowing expansion outside their traditional areas of operation and facilitating the distribution of heroin into smaller cities and suburbs.

Law enforcement faces several difficulties in combating heroin use. The nonviolent nature of heroin users, as compared with that of users of

drugs such as cocaine or methamphetamine, often misdirects law enforcement priorities from focusing on heroin. Also, the shortage of qualified linguists and translators complicates law enforcement penetration of many ethnic criminal enterprises.

Demand

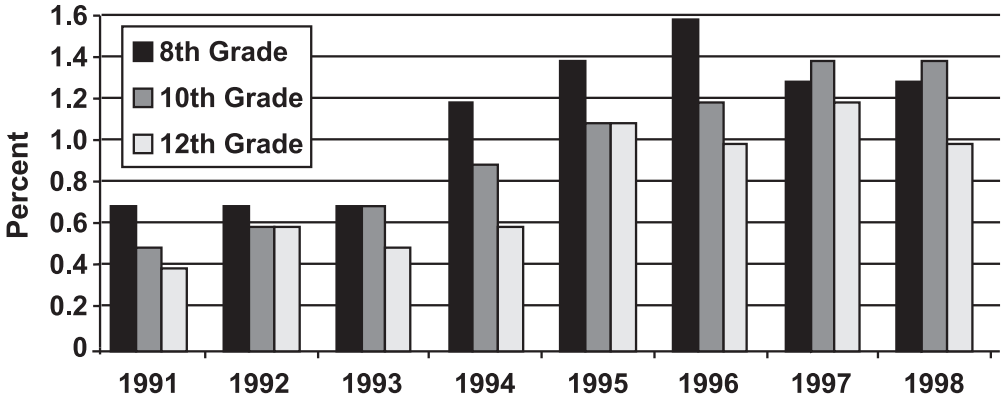
Heroin use in the United States has been increasing steadily since the early 1990s, although the rate of increase is leveling off and use has begun to stabilize at high levels. No longer confined to the urban areas of the country, heroin use occurs in rural and suburban areas as well. Older users, those over 35, continue to be the largest user group. A review of law enforcement, medical, and open-source data indicates that suburban consumers aged 12–25 have been one of the fastest growing user groups in the 1990s, but the rate of growth has stabilized more recently. Prevalence is highest among whites followed by Hispanics and African Americans. Users are predominantly male, but use among females has increased.

New users often begin by smoking, sniffing, or snorting the drug instead of injecting it. Heroin's reasonably low price and high quality enable users to snort or smoke the drug, removing the stigma and risk associated with injection. Many new users and young people mistakenly believe snorting or smoking the drug will not lead to addiction.

- **Monitoring the Future Study (MTF):** According to MTF, heroin use among high school students increased in the mid-1990s but has more recently stabilized. While there was minimal change in annual heroin use between 1991 and 1993 among eighth-, tenth-, and twelfth-grade levels, all three grades showed some steady increase after 1993 (see Chart 1). By 1996, the prevalence rate for each grade level was more than double the rate of 1991. Although the rate of use stabilized by 1998, it remains nearly double the level in 1991.
- **The National Parents' Resource Institute for Drug Education (PRIDE):** According to PRIDE, current heroin use by some segments of the adolescent population has been increasing. Annual heroin usage rates have recently dropped for junior high school students (grades 6–8). However, rates for twelfth graders and senior high school students (grades 9–12) have increased. Annual heroin usage for grades 9–12 increased from 3.1 percent of those surveyed nationally during the 1996–1997 school year to 3.2 percent during the

Chart 1

Prevalence of Heroin Use Among Students



1997–1998 school year. More significantly, annual use among twelfth graders increased from 3.4 percent during the 1996–1997 school year to 3.8 percent during the 1997–1998 school year.

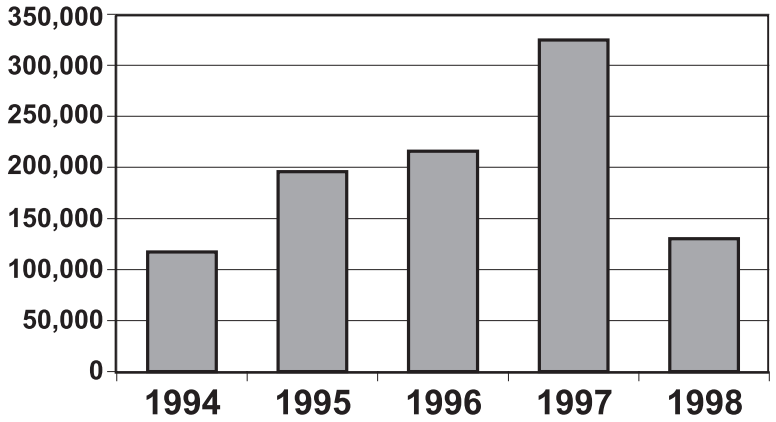
- **1998 National Household Survey on Drug Abuse (NHSDA):** According to the 1998 NHSDA, the estimated number of current heroin users increased 177 percent from 117,000 in 1994 to 325,000 in 1997, but then subsequently decreased to only 130,000 in 1998 (see Chart 2). Though these numbers suggest a sharp reduction in heroin use, NHSDA does not consider the drop from 1997 to 1998 significant. Estimates of heroin use from the survey are considered conservative because numbers are probably underreported and the survey does not cover all categories. The survey further reports an estimated 81,000 individuals tried heroin for the first time in 1997. Large numbers of the initiates reportedly are young and are smoking, sniffing, or snorting heroin. The rate of initiation for the 12–17 age group increased from less than 1 percent during the 1980s to 2.7 percent in 1996 and dropped to 1.1 percent in 1997. Among initiates in the 1997 and 1998 surveys, 87 percent were under age 26 and 72 percent had never injected heroin.
- **Arrestee Drug Abuse Monitoring (ADAM) Program:** In contrast to the data reported by the national-level indicators mentioned previously, arrestee data regarding heroin use remained relatively stable between 1990 and 1998. In the majority of cities where data are collected, arrestees testing positive for opiates are 36 and older. However, some cities including New Orleans and St. Louis appear to have steadily increasing number of younger opiate users. In general, more female arrestees test positive for opiates than male arrestees.

The introduction of high purity heroin to the market in the early 1990s may account for the increase in heroin use. The higher purity enables users to effectively snort, sniff, or smoke the drug, removing psychological barriers to and the stigma of intravenous drug use. In 1995, MTF added survey questions regarding the use of heroin with or without a needle. The results show that a significant number of those reporting any heroin use in the past 12 months indicate using only without a needle. This is true of more than one-third of the eighth-grade users and one-half of the tenth- and twelfth-grade users in 1997. The NHSDA also reports that the proportion of lifetime heroin users who had ever smoked, sniffed, or snorted heroin increased from 55 percent in 1994 to 71 percent in 1997.

A possible reason for the increased heroin use among adolescents in particular may be declining rates in the disapproval of drug use and the perception of its risks. A strong correlation exists between

Chart 2

NHSDA Heroin Users



individuals' use of drugs and their attitudes and beliefs about using those drugs. According to MTF, the perceived risk associated with heroin declined steadily from 1975 through 1986. The MTF attributed this to "generational forgetting" of the drug's dangers. In other words, younger users have not had the opportunity to learn about the dangerous drug experiences of the people around them. The perceived risk rose slightly between 1986 and 1991, attributable to the newly recognized threat of the Human Immunodeficiency Virus (HIV) infection associated with intravenous drug use. After 1991, the perceived risk again fell, probably because heroin could now be taken by methods other than injection. As perceived risk fell, use by high school seniors rose, with annual prevalence increasing from 0.4 percent in 1991 to 1.1 percent by 1995; use also rose in the lower grades (see Chart 1). In 1996 and 1997, as perceived risk began to increase among eighth, tenth, and twelfth graders, usage rates stabilized. This may be the result of widely publicized antiheroin campaigns as well as the visibility of heroin-related deaths of celebrities in the entertainment and fashion industries.

While many of the national-level surveys mentioned to this point refer to heroin as a primary drug of use, it should be noted that heroin is often one of two or more drugs used by polydrug users. According to the 1997 Treatment Episode Data Set (TEDS), heroin admissions report secondary use of cocaine (27%), alcohol (26%), smoked cocaine (12%), and marijuana (12%). According to 1996 Drug Abuse Warning Network (DAWN) medical examiner data, cocaine and alcohol were the two substances most commonly involved in heroin-related deaths when more than one substance was involved. Many cocaine or methamphetamine users take heroin to mediate the negative effects associated with using a stimulant. Also, many heroin users take heroin in combination with cocaine or methamphetamine. This combination, a practice known as speedballing, often proves deadly.

Consequences

The consequences of heroin use can be gauged somewhat by national-level reporting systems including DAWN emergency department mentions, DAWN medical examiner data, and TEDS. As with the prevalence data, indicators began to rise in the early 1990s and have stabilized more recently at high levels.

- **DAWN Emergency Department Mentions:** In 1997, heroin/morphine was mentioned in 14 percent of DAWN emergency department visits—third only to alcohol-in-combination, which was mentioned in 33 percent of visits, and cocaine, which was mentioned in 31 percent of visits. From 1990 to 1995, the number of heroin/morphine-related mentions more than doubled from 33,884 to 70,838 (see Table 1). However, from 1995 through 1997 heroin/morphine-related mentions remained relatively stable. Males accounted for 67 percent of heroin/morphine-related emergency department mentions in 1997.
- Heroin/morphine-related emergency department mentions among individuals aged 12–17 increased 241 percent between 1995 and 1997, as shown in Table 2.

Table 1: Heroin/Morphine-Related Emergency Department Drug Mentions and Drug Visits

	1990	1991	1992	1993	1994	1995	1996	1997
Total	33,884	35,898	48,003	63,232	64,013	70,838	73,846	72,010
Rate per 100,000	15.3	16.3	21.0	27.6	27.8	30.3	31.4	30.3

Table 2: DAWN Emergency Department Heroin-Related Mentions Involving Youth Aged 12–17

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Mentions	168	182	182	232	280	507	404	559	1,379

- **DAWN Annual Medical Examiner Data:** Heroin/morphine was the second most frequently reported drug in DAWN medical examiner deaths between 1993 and 1996, second only to cocaine. In 1996, heroin/morphine was reported 42 percent of the time while cocaine was reported 47 percent of the time. In 1996, 45 percent of all medical examiner-reported deaths of males involved heroin/morphine; 32 percent of all medical examiner-reported deaths of females involved heroin/morphine. Table 3 shows heroin/morphine mentions increased 10 percent between 1993 and 1995 from 3,809 to 4,207, according to DAWN data. From 1995 to 1996, heroin/morphine mentions decreased 6 percent from 4,207 to 3,938.

Table 3: Heroin/Morphine Drug Mentions

	1993	1994	1995	1996
Mentions	3,809	3,647	4,207	3,938
Percent of Total	44.9	41.6	45.4	42.3

- **TEDS:** Drug treatment admissions for heroin as the primary substance of abuse increased 31 percent, from 166,630 in 1992 to 217,868 in 1997, according to TEDS. The proportion of opiate admissions—primarily heroin—surpassed the proportion of cocaine admissions for the first time since 1992. In 1997, admissions for primary heroin abuse accounted for 15 percent of all treatment admissions reported in TEDS, up from 11 percent in 1992. While most admissions for primary heroin abuse involved injecting heroin, the proportion of admissions for heroin snorting increased from 19 percent in 1992 to 28 percent in 1997. Admissions for heroin snorting tend to be younger than admissions for heroin injecting.

Purity levels play a major factor as to why an individual chooses to snort a drug. For example, a June 1999 Community Epidemiology Work Group (CEWG) report for Newark indicated that at the same time purity levels decreased, snorting, as a primary route of ingestion, decreased and injection use increased.

Indicators suggest that many of the newer heroin users are snorting and, to a far lesser extent, smoking the drug, believing these methods will not lead to addiction. Unfortunately, as an addiction develops tolerance level increases, and users will often switch to injection, a more efficient method to administer the heroin. The smaller doses required for injection also cost less, making injection financially attractive to frequent users.

While many heroin users start out gainfully employed, the overwhelming need to support their habits often leads to criminal behavior such as prostitution, drug dealing, and robbery. In

addition to committing crimes against society, users who inject heroin are at risk of HIV and other infectious diseases contracted and spread through intravenous drug use.

Although the impact of heroin use has been felt nationwide, use varies from region to region and state to state. An analysis of key indicators—arrests, emergency room mentions, drug treatment admissions, and deaths—shows that heroin use is highest in the Northeast Region, but heroin markets are expanding in the South, North Central, and West Regions.

Source of Supply

Heroin from all four source regions—South America, Mexico, Southeast Asia, and Southwest Asia—is supplied to the United States, according to DEA, the Federal Bureau of Investigation (FBI), USCS, and State and local law enforcement information. The source of supply varies regionally with some types of heroin predominating in select areas. In some cities the source of heroin may actually vary year to year.

- **South American** heroin is readily available at the wholesale and retail levels in the Northeast and South Regions. South American heroin is also available in several cities in the North Central Region, primarily Chicago and Detroit. South American heroin in the West Region is mostly destined for eastern markets, according to DEA and local law enforcement reporting. DEA's 1998 price and purity data show that at the wholesale level, South American heroin sold for as low as $50,000 per kilogram in the Houston area.
- **Mexican** heroin is readily available at the wholesale and retail levels in the West Region. Additionally, Mexican heroin is available in certain cities in the North Central Region and in limited amounts in niche markets in the South Region. At the wholesale level, Mexican heroin sold for as low as $18,000 per kilogram in the Los Angeles area according to state and local reporting, and for $25,000 per kilogram in the Seattle area, according to DEA. DEA's 1998 price and purity data show that Mexican heroin sold for as low as $35,000 per kilogram in most other areas.
- **Southeast Asian** heroin is readily available at the street level in the North Central Region and is available in a number of cities in the Northeast and South Regions. Much of the Southeast Asian heroin available in the West Region is destined for distribution in the Northeast and South Regions. DEA's 1998 price and purity data show that at the wholesale level, Southeast Asian heroin sells for as low as $70,000 per kilogram in the New York area.
- **Southwest Asian** heroin is available at the street level principally in the cities of Chicago, Atlanta, and Detroit. Southwest Asian heroin is available only in limited quantities in other parts of the country. DEA's 1998 price and purity data show that at the wholesale level, Southwest Asian heroin sold for as low as $55,000 per kilogram in the San Francisco area.

Trafficking

At least 170 criminal enterprises and 256 street gangs have been identified as involved in the importation or distribution of heroin, according to DEA, FBI, USCS, the National Drug Intelligence Center (NDIC), and State and local law enforcement data. The data are not all-inclusive and are based on case file information that details the ethnicity of individuals being investigated. Of the 170 identified criminal enterprises, the most

frequently reported are Colombian, Dominican, Mexican, Nigerian, and ethnic Chinese.

Many of the criminal enterprises identified as involved in heroin trafficking are small, independent, and loosely structured. Most are not involved in the growing of opium or the processing of heroin; rather, they tend to limit their activity to the importation and wholesale distribution of heroin.

Colombian criminal enterprises effectively exploit the existing retail drug distribution networks predominantly controlled by Dominican groups that operate primarily in the eastern United States and the Caribbean. Criminal enterprises based in Puerto Rico acquire South American heroin and smuggle it for distribution into areas on the Eastern Seaboard, where there are large or growing Hispanic communities.

Criminal organizations operating from Mexico almost entirely manage the networks that distribute Mexican heroin in the United States, and Mexican-American criminal gangs distribute the heroin at the street level. Local and prison-based gangs, such as the Black Guerrilla Family, control street distribution of the drug.

Nigerian traffickers smuggle Southeast and Southwest Asian heroin and typically distribute it at the street level to dealers, including members of African-American street gangs. FBI and DEA reporting indicates that Southeast Asian heroin imported by ethnic Chinese traffickers is being sold to and distributed by Dominican and Italian Organized Crime groups.

Recent trends indicate that members and associates of street gangs are increasing their involvement in the regional and street distribution of heroin, according to State and local data. Elements within national gangs such as the Gangster Disciples, Bloods, Crips, Vice Lords, and Latin Kings maintain links to multiple heroin trafficking criminal enterprises to ensure a constant supply. As these gangs expand outside their normal areas of operation, so do their drug distribution capabilities. This may partially explain the expansion of heroin use into suburban and rural areas. In addition, the migration of members of East and West Coast-based gangs may affect heroin trafficking in the future.

Heroin enters the United States through multiple air, land, and sea ports of entry by various concealment methods, according to USCS, DEA, and FBI data. Heroin was seized at 127 of 436 ports of entry from 1994 to 1998.

Airports remain the most prevalent seizure points for South American, Southeast Asian, and Southwest Asian heroin entering the United States. Heroin is smuggled into all four regions of the country by commercial air passengers and mail because those means are more difficult to detect and offer insulation to traffickers. There are indications that heroin traffickers are taking advantage of the expansion of international air traffic (passenger and mail parcel) to cities in the heartland of the United States. Couriers or airmail parcels were interdicted on more than 267 different flights using 60 different international airlines and entering 55 different U.S. international airports, according to Federal seizure data (see Charts 3 and 4). The most active airports in terms of number of events and seizure weights are located in the Northeast and South Regions. Airports in Miami, New York and, to a lesser extent, Newark and San Juan accounted for over 80 percent of seizures events at ports of entry. It should be noted that two flights—one originating from Cali and one from Bogota, Colombia—accounted for a disproportionate amount of all passenger flight seizures.

Heroin is smuggled across land ports of entry along the Southwest and Northern Borders. The high volume of vehicular traffic and long, porous borders with Mexico and Canada provide smugglers with multiple opportunities to enter the United States without being detected. Land ports of entry along the Southwest Border—including San Ysidro, California; El Paso, Texas; and Nogales, Arizona—remain the most active. According to 1994 to 1998 USCS data, 22 ports of entry along the Southwest Border reported seizures. Federal seizure data report that 16 Northern Border ports of entry—including Blaine,

Chart 3

Most Active Airports by Amount Seized 1996–1998

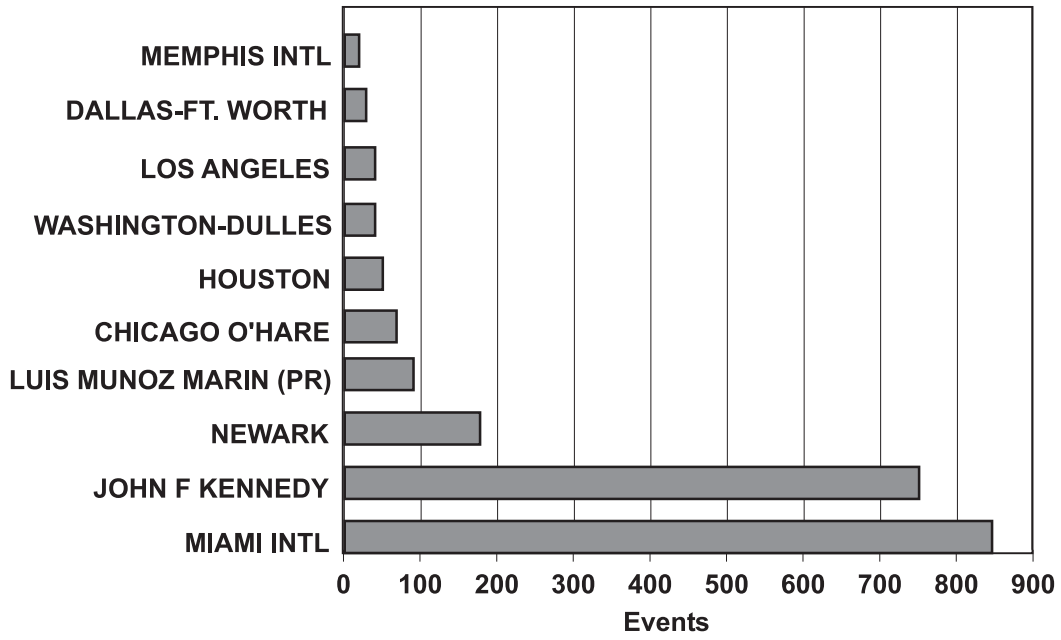
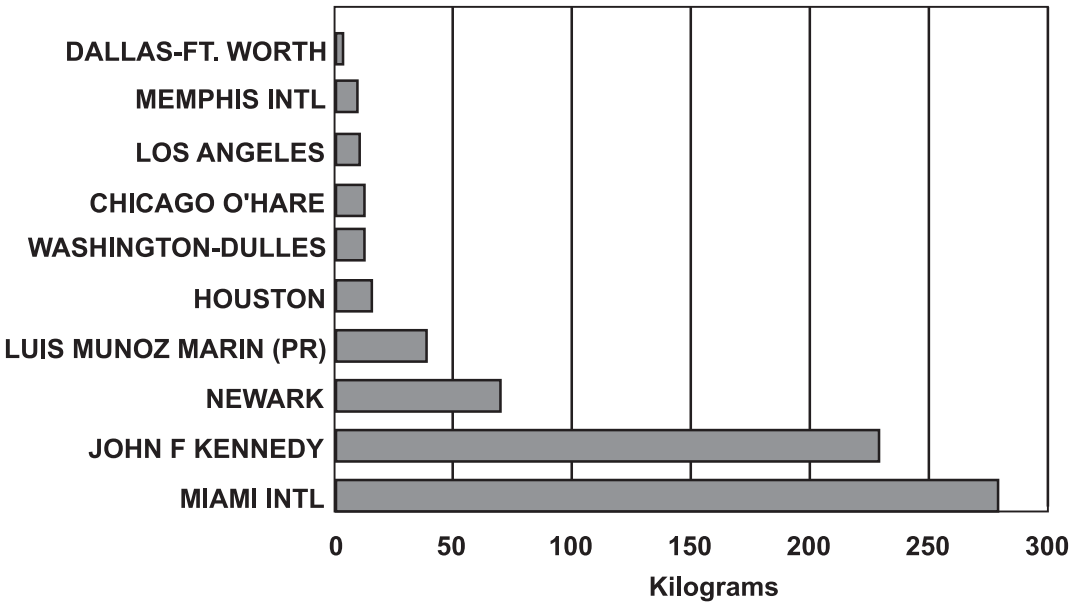


Chart 4

Most Active Airports by Seizure Event 1996–1998



Washington; Port Huron, Michigan; and Buffalo, New York—seized heroin over the same period.

Sea ports of entry continue to be arrival points for heroin, according to Federal law enforcement intelligence information. Heroin, concealed in maritime containerized cargo or carried by ships' crewmembers, is shipped to three of the four regions in the United States. USCS discovered and seized large shipments of heroin, largely without the benefit of prior intelligence, until approximately 1995. Since 1995, unconfirmed reports have indicated that heroin continues to enter the United States by way of containerized cargo, though not one of these reports has resulted in a large seizure. Given the tremendous volume of containerized cargo and the lack of resources to inspect even a small percentage of containers, this lack of seizures is by no means indicative of the cessation of this smuggling method. In fact, customs services throughout the world, namely in Australia and Canada, have made numerous heroin seizures from containerized cargo. These seizures suggest that the concealment of heroin in containerized cargo continues to be an important method of smuggling heroin.

South American heroin is smuggled into the United States through international airports, primarily Miami International and John F. Kennedy International, and a limited number of land ports of entry. From 1994 to 1998, South American heroin couriers transited one or more of at least 20 different countries before entering the United States at airports in New York, Newark, Miami, and San Juan and at various Southwest Border ports of entry, according to USCS seizure data. The primary methods of concealment are courier (in body cavities, swallowed, or on the body) and in luggage. According to the 1999 Puerto Rico/ Virgin Islands High Intensity Drug Trafficking Area Threat Assessment, heroin is being transshipped with cocaine in containerized cargo. In July 1999, a containerized shipment of fruit pulp, also containing 20 kilograms of heroin and 12 kilograms of cocaine, was seized in Buenaventura, Colombia. The shipment's destination was New York City. The USCS has made several small seizures of heroin and cocaine at land ports of entry in the southwestern United States. A recent trend has been the increased use of airmail and Express Mail packages to smuggle heroin from South America.

Mexican heroin is smuggled across the Southwest Border of the United States. More than 20 Southwest Border ports of entry—including Otay Mesa, California; San Luis, Arizona; and Laredo, Texas—are used to smuggle heroin, according to USCS seizure data. The primary method of concealment is the use of hidden compartments in motor vehicles crossing the border. This method is preferred because the high volume of vehicular traffic crossing border ports of entry impedes effective interdiction. The quantities smuggled are normally small amounts, 1 to 2 kilograms. However, in the last 3 years there have been several instances where larger quantities of heroin were smuggled across the border: 25 kilograms were seized in 1996 in one incident at the Texas border town of Del Rio, and 8.6 kilograms were seized in mid-1997 near Edna, Texas.

Southeast Asian heroin is smuggled through more ports of entry, by more methods of concealment than any other type of heroin. Southeast Asian heroin traffickers transited one or more of at least 30 countries before entering one of more than 50 U.S. ports of entry, according to USCS seizure data. Southeast Asian heroin is smuggled across the Northern and, to a lesser extent, the Southwest Borders. Federal law enforcement and Intelligence Community reporting indicates that methods of concealment include couriers swallowing or carrying heroin in body cavities or on their person; hiding heroin in luggage on airlines, vehicles, and trains; and using commercial and private parcel mail and commercial containerized cargo.

Southwest Asian heroin is smuggled through multiple ports of entry using a variety of concealment methods. USCS seizure data indicate that Southwest Asian heroin traffickers transited one or more of at least 20 different countries before entering one of more than 15 U.S. ports of entry. Federal law enforcement and the Intelligence Community

report the preferred methods of concealment are hiding heroin in parcels, using couriers, and concealing the drug in containerized cargo.

Drug trafficking criminal enterprises smuggle and transport heroin to hub cities in the United States. Street gangs and users who purchase heroin for resale to fund their habit conduct retail distribution. Heroin is distributed from these hubs regionally and across the country. A review of Federal, State, and local law enforcement reporting indicates that New York, Chicago, and Los Angeles are key hub cities and handle a large portion of the heroin sold in the United States.

- New York serves as the primary hub for the distribution of South American heroin. It also serves as one of the hubs for distribution of Southeast Asian and Southwest Asian heroin, according to Federal, State, and local law enforcement data. Traffickers use New York to broker deals and distribute heroin to the Northeast, North Central, and South Regions.
- Chicago serves as the primary hub for the distribution of all four types of heroin. Traffickers distribute heroin from Chicago to cities in the North Central Region and to select cities in the Northeast and South Regions and, to a lesser extent, in the West Region.
- Los Angeles serves as the primary distribution hub for Mexican heroin and as a transshipment site for Southeast Asian and Southwest Asian destined for the Northeast and North Central Regions, according to Federal, State, and local law enforcement data. Recent seizures indicate that South American heroin en route to the Northeast has also transited Los Angeles.

Regional

The Northeast Region

(Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania)

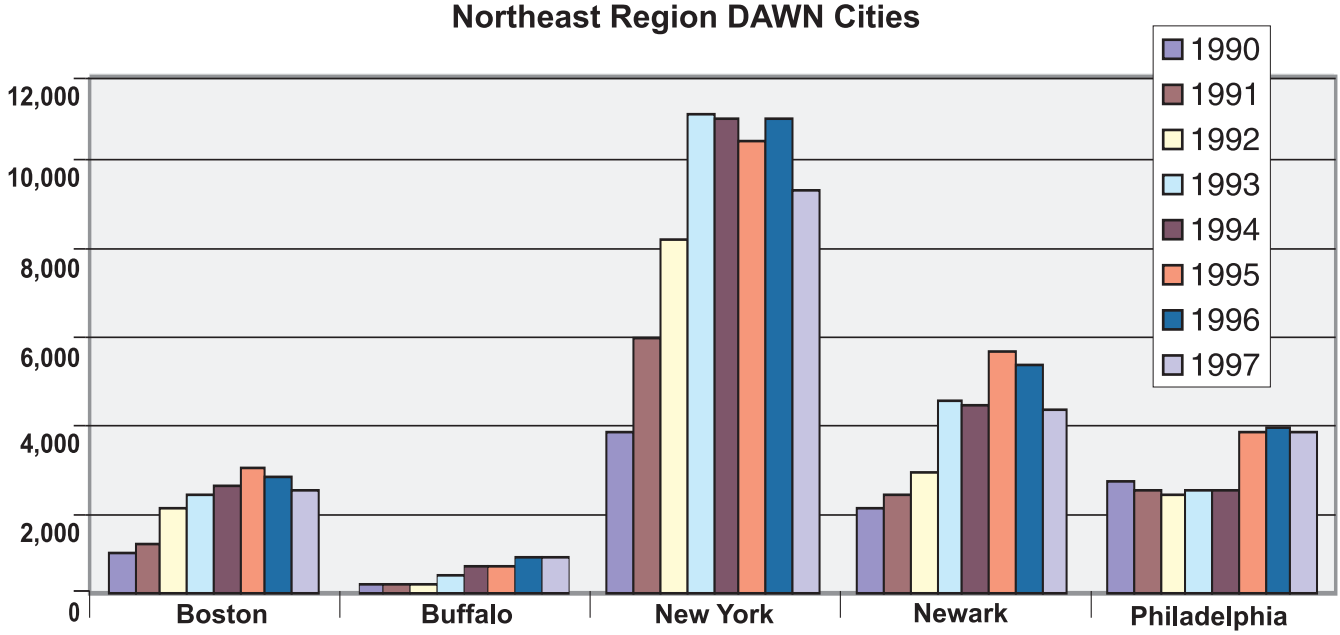
Demand

The Northeast Region of the United States contains the largest heroin consuming population in the country. While once confined to the larger, more urban areas, heroin distribution in the Northeast is expanding into suburban areas and small towns. The increase in snorting as a route of administration is predominantly attributable to the Northeast, particularly New York and New Jersey. The plentiful supply of heroin enables dealers and users to buy it in the large metropolitan cities and resell it for an inflated cost in smaller cities and towns. Use in the Northeast Region of the United States appears to have stabilized at high levels.

- According to MTF, the Northeast has one of the highest heroin usage rates among high school seniors.
- Heroin/morphine-related emergency department mentions in the region's DAWN cities increased 116 percent between 1990 and 1997, from 9,554 to 20,663. (See Chart 5.) The most significant increase was in Buffalo, New York, where emergency department mentions increased 344 percent from 106 in 1990 to 471 in 1997. Emergency department mentions generally climbed throughout the 1990s in each of the five DAWN cities in the Northeast Region.
- From 1993 to 1996, heroin/morphine-related deaths in Boston, Buffalo, New York, Newark, and Philadelphia declined 16 percent overall.
- Heroin-related drug treatment admissions increased 50 percent between 1992 and 1997, from 67,727 to 101,890, according to TEDS.

Chart 5

Emergency Department Mentions
Northeast Region DAWN Cities



- Opiate use among arrestees in the Northeast is among the highest in the nation, according to the 1998 ADAM results. Both Philadelphia and New York experienced adult male opiate positive rates in excess of 16 percent.
- An upward trend of intranasal use of heroin in New York City continued into 1998, according to CEWG. Fifty-nine percent of heroin admissions to all New York City drug treatment programs reported intranasal use as the primary route of administration. Overall, the majority of those admissions were Hispanic males over 35. Intranasal users were most frequently Hispanic males while injectors were most frequently white males. While there appears to be a large proportion of "old time" heroin users who have begun purchasing and using heroin again, reportedly there is a steady increase of young buyers.
- Heroin indicators in Boston may be leveling off after steady increases over the last few years, according to CEWG. The proportion of emergency department mentions attributable to heroin remained relatively stable in 1998. While heroin accounts for the largest percentage of publicly funded treatment admissions, the percent of treatment admissions who reported using heroin in the month before entering treatment has remained stable. Nonetheless, heroin remains a cheap, pure, readily available alternative to cocaine.
- Heroin admissions in Newark, New Jersey, accounted for 78 percent of all treatment admissions in the first half of 1998, according to the CEWG. In 1992, heroin admissions accounted for 44 percent of all admissions. In the first half of 1998, 78 percent of all Newark heroin admissions reported snorting heroin while 21.5 percent injected the drug. Statewide in the first half of 1998, 60 percent reported snorting the drug while 39 percent reported injecting it. Recently, heroin snorting has declined and heroin injecting has increased. Interestingly, during this same time period, purity levels in Newark decreased.

Source of Supply

In the Northeast Region**,** South American heroin is readily available in all major metropolitan areas, and Southeast Asian heroin is available in most major cities, according to Federal, State, and local law enforcement data. South American

heroin predominates in much of the market, based on DEA investigations and results of the Domestic Monitor Program (DMP) and the Heroin Signature Program (HSP). However, DEA and FBI reporting indicates that Southeast Asian heroin continues to flow to the region, and limited amounts of Southwest Asian heroin are also available in a select number of cities.

- **South American** heroin retains the largest market share in the region because of its low price and high purity, according to the DMP and the HSP. Street-level heroin purity over the past 3 years has averaged approximately 67 percent, ranging from an average low of 57.8 percent in Springfield, Massachusetts, to an average high of 79.5 percent in Philadelphia. South American heroin sells at the wholesale level for as low as $75,000 per kilogram and at the retail level for as low as $85 a gram. Over the last 5 years, the availability of South American heroin has increased, and South American heroin has assumed a large portion of the market traditionally satisfied by Southeast Asian heroin, according to Federal, State, and local law enforcement.
- **Southeast Asian** heroin continues to enter the region. New York City remains a primary destination for wholesale Southeast Asian heroin shipments into the United States. Southeast Asian heroin sells at the wholesale level for as low as $70,000 per kilogram. Street-level purity over the past 3 years has averaged approximately 60 percent, ranging from an average low of 29.9 percent in Boston to an average high of 78.1 percent in New York City.
- **Southwest Asian** heroin is available in the region, but in limited quantities compared to South American and Southeast Asian heroin, according to Federal, State, and local law enforcement data. Southwest Asian heroin sells at the wholesale level for as low as $70,000 per kilogram. Street-level purity over the past 3 years has averaged approximately 43 percent, ranging from an average low of 8.6 percent to a high of 90.4 percent in New York City. The street-level purity of Southwest Asian heroin may be increasing in order to compete with South American and Southeast Asian heroin.
- **Mexican** heroin is rarely available in the region.

Trafficking

Numerous criminal enterprises traffic heroin in the Northeast Region. Colombian, Dominican, Chinese, and Nigerian traffickers are the most active, according to Federal, State, and local law enforcement reporting. Colombian traffickers are heavily involved in the wholesale importation and, to a lesser extent, distribution of South American heroin. Although Dominicans are also involved in wholesale importation, they are primarily involved in retail distribution. Nigerians import Southeast Asian heroin and, to a lesser extent, Southwest Asian heroin into the region, which is transferred to markets in the Midwest and the South. Ethnic Chinese groups continue to import Southeast Asian heroin into the region. Cantonese brokers remain heavily involved in the trade, while Fukinese are increasing their involvement in heroin smuggling into the New York City area. Ethnic Chinese Vietnamese are trafficking in several of the major cities. In addition, Italian Organized Crime groups as well as Middle Eastern and East European organizations remain engaged in heroin importation and wholesale distribution.

Colombian heroin traffickers have established distribution outlets throughout the eastern portion of the United States, primarily Boston, New York City, Newark, and Philadelphia. Colombian traffickers built a loyal clientele by offering cheap, high purity heroin. They used a variety of tactics to establish mid- and retail-level outlets for their heroin: fronting ounce to multiounce quantities to first-time buyers, insisting that some established

cocaine distributors buy and sell heroin as a condition of doing business, and underselling competitors. Use of these tactics has slowed considerably since 1997, reflecting that the Colombian traffickers are firmly entrenched in Northeast Region markets.

Dominican organized groups have played a significant role in the retail-level distribution of heroin in the Northeast Region for the last two decades. In the past, Colombian trafficking organizations used Dominican criminal groups as distributors to insulate themselves from U.S. law enforcement, setting the stage for more independent operations on the part of Dominican traffickers. Today Dominican trafficking groups dominate the heroin and cocaine retail markets in major Northeast Region cities such as New York, Boston, and Philadelphia. While New York City continues to be the primary base of operation for Dominican drug groups, they are increasingly active in New England and have migrated as far south as Richmond, Virginia, where by late 1997 they controlled over 90 percent of the city's heroin market, according to DEA.

Heroin is smuggled into the Northeast Region through various air, sea, and land ports of entry, according to USCS, DEA, and FBI data. Heroin is seized from couriers and parcels at the region's international airports in New York, Newark, and Boston every year. Despite a lack of seizures, DEA, FBI and USCS intelligence continues to indicate that heroin is entering the region's maritime ports in New York, Newark, and to a lesser extent Philadelphia, concealed in commercial containerized cargo. Additionally, limited quantities of heroin are smuggled across land ports of entry along the Canada–U.S. border such as Buffalo and Champlain, New York, Alburg, Vermont, and Jackman, Maine, according to investigative data from USCS, FBI, and DEA.

New York is the primary distribution hub in the Northeast Region, supplying heroin to many of the major cities such as Boston, Newark, and Philadelphia, as well as smaller cities and towns in the region, according to DEA, FBI, and State and local law enforcement information. Reporting indicates that heroin distribution has spread to small towns and cities within the region. Increasingly, users drive to large cities to buy heroin, and sell it in their hometowns to support their habit. This trend has resulted in the establishment of additional secondary distribution centers in such places as Wilmington, Delaware, New Haven, Connecticut, and Harrisburg, Pennsylvania.

The North Central Region

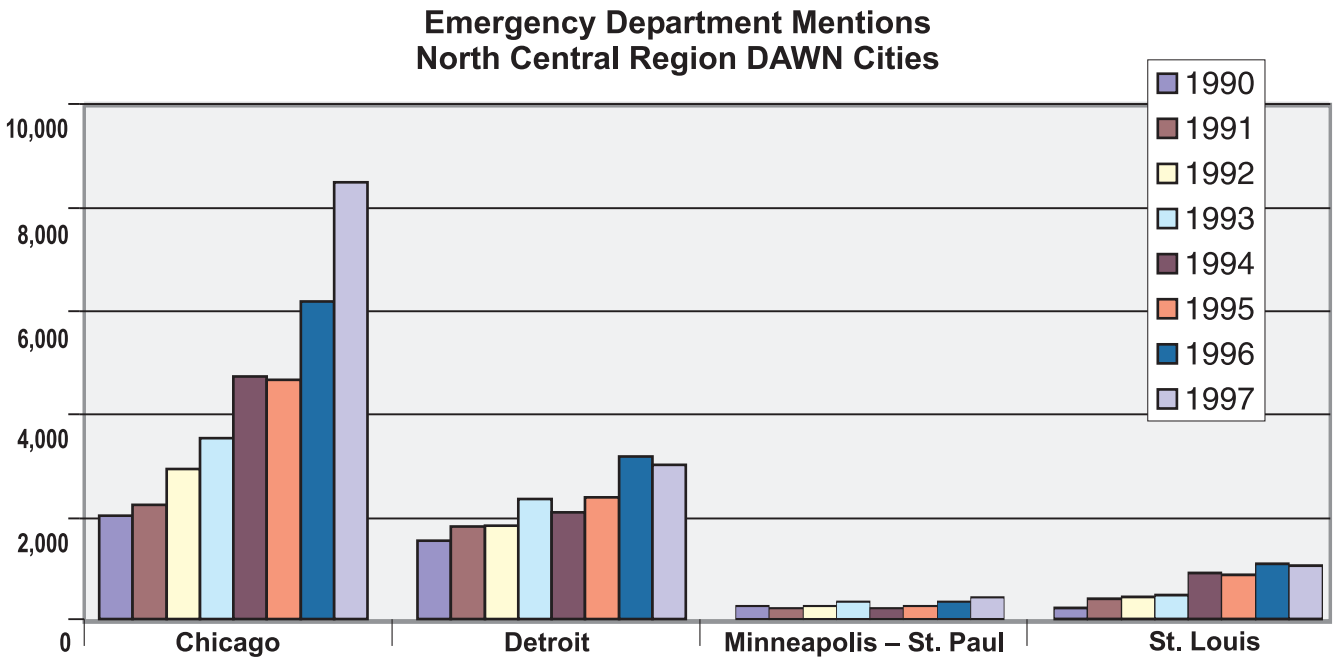
(Ohio, Michigan, Indiana, Illinois, Missouri, Kansas, Nebraska, South Dakota, North Dakota, Minnesota, Iowa, Wisconsin)

Demand

As in the Northeast and South Regions, heroin use in the North Central Region continues to grow in the large metropolitan areas of Chicago and Detroit and is expanding in the smaller markets such as St. Louis. (See Chart 6.)

- Heroin/morphine-related emergency department mentions increased 225 percent in the region's DAWN cities including Chicago, Detroit, Minneapolis-St. Paul and St. Louis between 1990 and 1997, from 3,788 to 12,321. Chicago mentions increased 323 percent from 2,039 in 1990 to 8,633 in 1997, while those in St. Louis increased 350 percent from 105 in 1990 to 472 in 1997.
- From 1993 to 1996, heroin/morphine-related deaths in the region's DAWN cities—including Chicago, Cleveland, Detroit, Fargo, Indianapolis, Kansas City, Milwaukee, Minneapolis-St. Paul, Omaha, St. Louis, and Sioux Falls—decreased 5 percent. Total deaths in Chicago decreased 33 percent from 334 in 1993 to 224 in 1996. While the number of deaths was relatively low, the greatest change occurred in

Chart 6



Kansas City, with an increase 533 percent from three in 1993 to 19 in 1996.

- Heroin-related drug treatment admissions in the region increased 52 percent between 1992 and 1997, from 11,184 to 17,011, according to TEDS.
- In the North Central Region, both males and females tested opiate positive most frequently in Chicago, Illinois, at 18.3 percent and 27 percent respectively, according to the 1998 ADAM results.
- Indicators suggest continued escalation in heroin use in Chicago in 1998, according to the CEWG. The number of emergency department mentions continues to climb. While emergency department mentions are higher for men than women, the rate of increase is higher for women. Treatment admissions for heroin snorting rose 90 percent between 1993 and 1997 and 40 percent between 1996 and 1997.
- CEWG reports increased heroin use among suburban youth in Detroit. Local school surveys in suburban Detroit found heroin use levels above national averages. A highly publicized case involved a 16-year-old honor student who robbed a gas station to support her $200-a-day habit.
- Heroin use is increasing in St. Louis, according to most CEWG indicators. DAWN medical examiner data show a gradual rise in the number of heroin-related deaths, and emergency department mentions more than doubled from 215 in 1993 to 502 in 1996. Although purity levels of heroin in St. Louis are relatively low, 33 percent of treatment admissions report smoking or sniffing as the primary route of administration.
- According to MTF, the North Central Region has one of the lowest heroin usage rate among high school seniors.

Source of Supply

Southeast Asian and Mexican heroin are readily available in most major cities of the North Central Region according to Federal, State, and local law enforcement data. Southwest Asian heroin's availability appears limited to the Chicago and Detroit metropolitan areas. South American heroin is increasingly available in Chicago and Detroit. Southeast Asian heroin appears to com-

mand the largest market share followed by Mexican, Southwest Asian, and South American heroin.

- **Southeast Asian** heroin is readily available in many areas of the region. Southeast Asian heroin trafficked by Nigerians continues to be available in most major cities and suburbs in the region. Street purity levels reportedly have averaged approximately 35 percent over the past 3 years, ranging between an average low of 20.8 percent in Chicago to an average high of 51.6 percent in Detroit. The street price for a gram of Southeast Asian heroin is as low as $100, while a kilogram at the wholesale level sells for as low as $100,000.
- **Mexican** black tar heroin and, to a lesser extent, brown powder heroin are available in many areas of the region, although there are indications that their market share is decreasing. Mexican heroin is increasing in purity and decreasing in price, possibly to compete with Southeast Asian and South American heroin entering the region. Purity levels have averaged approximately 20 percent over the past 3 years, ranging between an average low of 6.9 percent in Detroit to an average high of 50.3 percent in Chicago. The street price for a gram of Mexican heroin is as low as $100, while at the wholesale level a kilogram sells for as low as $90,000.
- **Southwest Asian** heroin is reportedly confined to Chicago and Detroit, according to DEA's DMP. Southwest Asian heroin is expensive in comparison to Mexican, Southeast Asian, and South American heroin. Street purity levels have averaged approximately 24 percent over the past 3 years. Southwest Asian heroin sells for as low as $120,000 per kilogram at the wholesale level and $175 per gram at the street level.
- **South American** heroin is available in the region, primarily Chicago and Detroit. Recent DMP results for Chicago and Detroit indicate that in Chicago the number of South American heroin samples now equals Southeast Asian heroin samples, while in Detroit, South American heroin samples have exceeded Southeast Asian heroin samples for the last two reporting periods. Several purchases and seizures of South American heroin have been made in St. Louis according to DEA's HSP. The fact that South American heroin is being purchased with greater frequency in both cities suggests that South American organizations are attempting to establish greater control of the heroin market in the North Central Region. South American heroin street-level purity has averaged approximately 40 percent over the past 3 years, ranging between an average low of 30.2 percent in Chicago to an average high of 52.2 percent in Detroit. A kilogram of South American heroin sells for as low as $100,000 at the wholesale level, while the street price for a gram of heroin is as low as $125. How and where South American heroin is distributed from these two cities is not yet determined.

Trafficking

Nigerian and Mexican criminal enterprises are the major importers and traffickers in the North Central Region, according to Federal, State, and local law enforcement reporting. Nigerian criminal enterprises have a large share of the region's heroin market. Nigerians distribute in the Chicago metropolitan area and many cities, towns, and suburbs throughout the region. Middle Eastern criminal enterprises, particularly Lebanese and Armenian, continue to supply Southwest Asian heroin to the Detroit area. Other ethnic-based criminal enterprises trafficking in heroin include ethnic Chinese and Colombian.

In the North Central Region, heroin is smuggled by air and land, according to USCS, DEA, and FBI data. Heroin is shipped in commercial airmail or by couriers to the region's international airports in Chicago, Cincinnati, St. Louis, Detroit, Indianapolis, Minneapolis, and Milwaukee. Additionally, heroin is smuggled across the U.S.–Canada border, particularly at the Detroit and Port Huron ports of entry.

Chicago serves as the primary distribution hub for all four types of heroin in the North Central

Region. In Chicago, Nigerians and other West African groups supply street gangs responsible for the retail distribution of heroin. Heroin trafficking by gang elements is increasing in cities throughout the region, according to NDIC. Criminal gangs such as the Gangster Disciples control heroin on the streets of Chicago. Local Hispanic and African-American street gangs supplied by groups in Mexico control retail sales of Mexican heroin in the region.

The South Region

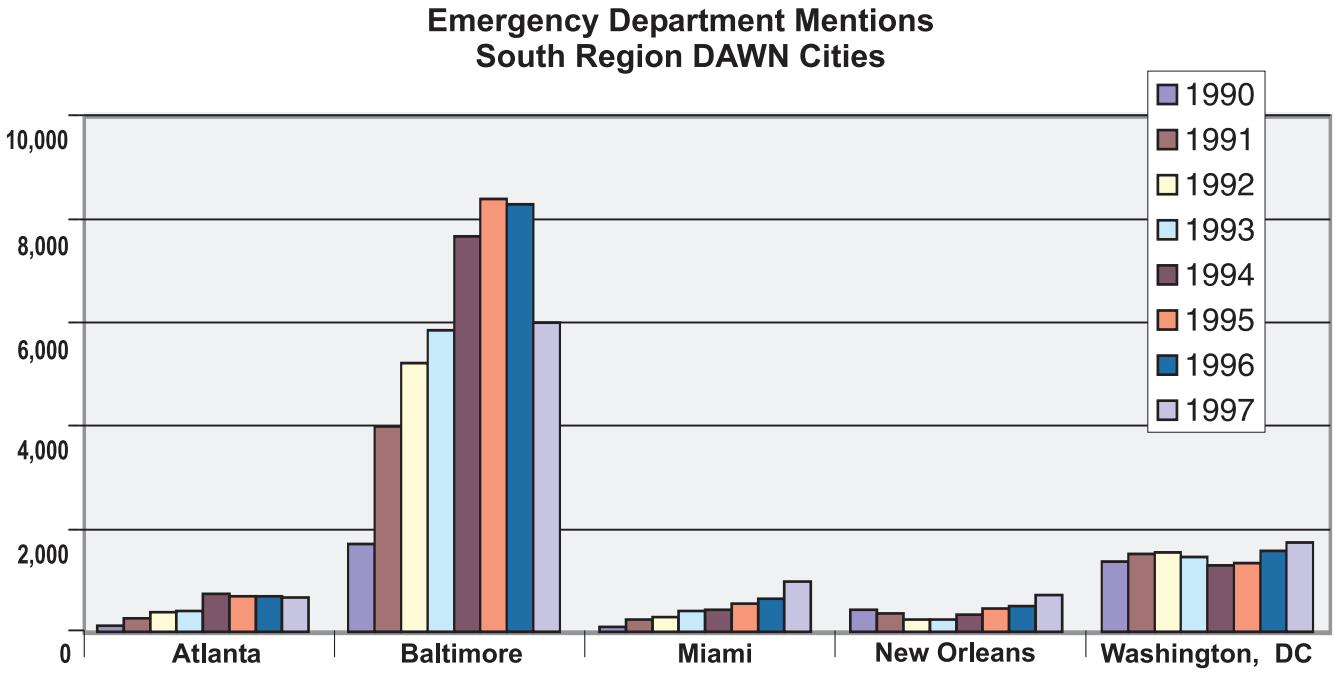
(Maryland, Delaware, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Oklahoma, Arkansas, Tennessee, Kentucky)

Demand

While the South Region of the United States includes traditional heroin markets in Baltimore, Maryland, and Washington, D.C., it is also experiencing the expansion of heroin into areas previously not associated with this drug, most notably Florida. (See Chart 7.)

- Heroin/morphine-related related emergency department mentions in the region's DAWN cities—including Atlanta, Baltimore, Miami, New Orleans, and Washington, D.C.—increased 165 percent between 1990 and 1997, from 3,389 to 8,994. The largest increase occurred in Miami, where emergency department mentions increased nearly 1000 percent from 55 in 1990 to 599 in 1997. In Baltimore, emergency department mentions increased by more than 250 percent from 1,661 to 5,873 during that same time frame.
- From 1993 to 1996, heroin/morphine-related deaths in the region's DAWN cities—Atlanta, Baltimore, Birmingham, Jackson, Louisville, Miami, New Orleans, Norfolk, Oklahoma City, and Washington, D.C.—increased 6.5 percent. Over half of total deaths occurred in

Chart 7



Baltimore where heroin/morphine-related deaths remained relatively stable from 1993 to 1996. During this same period, total heroin/morphine-related deaths increased 81 percent in New Orleans, Louisiana, from 21 to 38; 217 percent in Louisville, Kentucky, from six to 19; and 311 percent in Oklahoma City, Oklahoma, from nine to 37.

- Heroin-related drug treatment admissions in the region increased 13 percent between 1992 and 1997, from 18,665 to 21,051, according to TEDS.
- According to the 1998 ADAM results in the South Region, males tested opiate positive most frequently in New Orleans at 12.9 percent, and females most frequently in Birmingham at 17.6 percent.
- The majority of users in Atlanta admitted to treatment programs during the second half of 1998 were white males over 35, according to the CEWG. However, data indicate an increasing number of people under the age of 25 being admitted to treatment. Injection was the most common route of administration for individuals admitted to treatment programs. Interestingly, snorting as a route of administration decreased while smoking increased. Reportedly, many "old time" heroin users are being tempted to try the drug again with purity levels increasing and prices decreasing.
- While CEWG reports that heroin indicators have somewhat stabilized in metropolitan Baltimore after showing sharp increases from 1992–1995, anecdotal evidence points to a substantial and growing heroin problem among youth, particularly in the suburban communities surrounding Baltimore City.

Source of Supply

South American heroin is readily available throughout the South Region and appears to command the largest market share. Southeast Asian and Southwest Asian heroin are available in numerous cities. The availability of Mexican heroin is limited primarily to areas in the western segment of the region. Washington, D.C., continues to have South American, Southeast Asian, and Southwest Asian heroin available.

- **South American** heroin is the most prevalent type found in the South Region. The purity of South American heroin at street level has averaged approximately 38 percent over the past 3 years, ranging from an average low of 8.7 percent in Miami to an average high of 71.1 percent in Orlando. South American heroin at the wholesale level sells for as low as $70,000 per kilogram, while heroin at the street level sells for as low as $150 per gram.
- **Southeast Asian** heroin is also available in a large number of cities within the region, including Baltimore, Washington, D.C., Atlanta, and San Juan. The street-level purity of Southeast Asian heroin has averaged approximately 32 percent over the past 3 years, ranging from an average low of 13.6 percent in Washington, D.C., to a high of 76.3 percent in Baltimore.
- **Southwest Asian** heroin is available in limited quantities in numerous cities within the region, to including Washington, D.C., Atlanta, Baltimore, Miami, and New Orleans. The street-level purity of Southwest Asian heroin has averaged approximately 28 percent over the past 3 years, ranging from an average low of 2.1 percent in Miami to a high of 84 percent in Atlanta. Southwest Asian heroin at the wholesale level sells for as low as $95,000 per kilogram.
- **Mexican** heroin is available in limited amounts in several states in the western portion of the region. The street-level purity of Mexican heroin has averaged approximately 29 percent over the past 3 years, ranging from a low of 2.3 percent in Miami to an average high of 51.2 percent in Atlanta.

Trafficking

Colombian, Dominican, and Nigerian criminal enterprises are the key heroin importers and traffickers in the South Region, according to Federal,

State, and local law enforcement reporting. Dominican traffickers, who dominate heroin retail markets in the Northeast Region, have extended their operations to smaller cities in the South Region such as Richmond. However, numerous other criminal enterprises—including ethnic Chinese, Mexican, Russian, Hispanic, and Middle Eastern—are also engaged in the importation and distribution of heroin.

Heroin primarily enters the South Region by air. Couriers, both swallowers and body carriers, enter through the region's airports in Miami; Sterling, Virginia (Dulles International); and Atlanta. Miami International Airport is the principal port of entry for South American heroin. Nigerian couriers smuggle Southeast Asian and Southwest Asian heroin into the region through the Dulles and Atlanta International Airports. Additionally, airmail and express mail packages enter South Region facilities in Memphis, Louisville, and Atlanta. Federal law enforcement intelligence reporting indicates that heroin is occasionally smuggled in commercial containerized cargo into port facilities in Baltimore, Miami, Tampa, and New Orleans. Additionally, crewmembers on commercial and cruise ships smuggle heroin into Baltimore, Miami, San Juan, and St. Thomas.

The South Region has no primary distribution hub, unlike the Northeast, North Central, and West Regions. Atlanta and Miami serve as main transshipment points for heroin en route to other regions of the United States; however, some heroin is diverted for local consumption. Most of the heroin consumed in the region is transported from the Northeast. For example, New York City is the major source of heroin for the Baltimore, Washington, D.C., and Atlanta areas. Miami supplies heroin to New Orleans.

The West Region

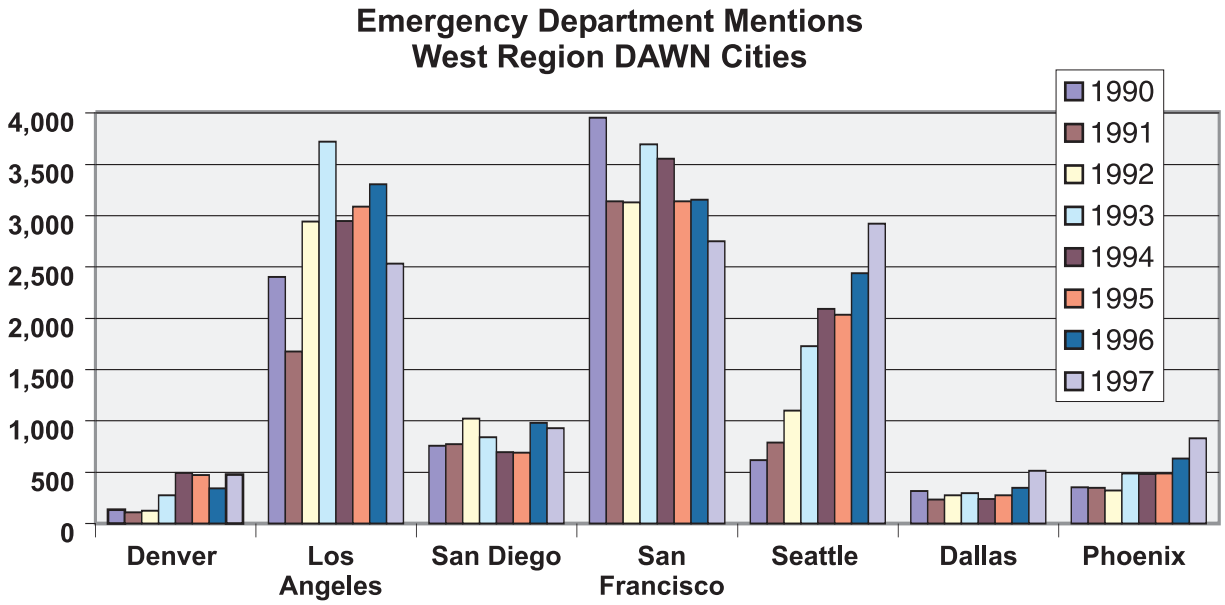
(California, Oregon, Washington, Montana, Idaho, Wyoming, Colorado, Arizona, New Mexico, Texas, Utah, Nevada, Hawaii, Alaska)

Demand

In the West Region, heroin use continues in large metropolitan areas and, as in other parts of the country, is expanding in other cities such as Portland and Seattle. Chart 8 shows DAWN Emergency Department mentions in Denver, Los Angeles, San Diego, San Francisco, Seattle, Dallas, and Phoenix. Data indicating the growth of heroin use in Portland is from ADAM and other sources.

- Heroin-related emergency department mentions within the region's DAWN cities increased 28 percent between 1990 and 1997, from 8,533 to 10,956. From 1990 to 1997, emergency department mentions increased 374 percent in Seattle from 616 to 2,922, 255 percent in Denver from 134 to 476, and 136 percent in Phoenix from 353 to 832.
- According to DAWN medical examiner data, heroin-related deaths between 1993 and 1996 rose in all 12 sites in the West Region. Large percentage increases occurred in Las Vegas, where deaths increased 206 percent from 18 in 1993 to 55 in 1996, and in Portland, where deaths increased 156 percent from 45 in 1993 to 115 in 1996.
- Heroin treatment admissions in the region increased 8 percent from 72,213 in 1992 to 77,916 in 1997, according to TEDS.
- According to the 1998 ADAM results for the West Region, males tested opiate positive most frequently in Seattle at 17.4 percent, and females most frequently in Portland at 25.1 percent.
- In Oregon, the State Medical Examiner's Office reports an average of five people a week died of heroin-related causes in the first 6 months of 1999. The number of drug-related deaths in the first quarter of 1999 was double the number for the same period in

Chart 8



1998. While the reason for the increase is unclear, it could be related to higher purity levels and increased frequency of daily use.

- Heroin continues to have the largest impact of all illicit drugs used in the Seattle area in terms of drug-related deaths, emergency department episodes, and criminal involvement, according to the CEWG. In 1998, 65 percent of all drug-related deaths in King County were heroin-related.
- Heroin indicators suggest use in Los Angeles is remaining steady or dropping slightly, with some indications that use among juveniles is increasing, according to the CEWG. While heroin purity levels continued to rise, heroin deaths decreased slightly from 1996 to 1997 but have remained steady over the past 5 years. Emergency department mentions have decreased since 1996. Treatment admissions rose only slightly while the percentage of heroin admissions in relation to all admissions dropped.
- Adolescent use of heroin in Texas is increasing, according to the CEWG and open-source reporting. While heroin is primarily injected, there are reports of younger adults burning heroin in aluminum foil and inhaling the fumes, a method known as "chasing the dragon." There are also reports of "shebanging," a practice where heroin is dissolved in water and then either sprayed up the nose using a bottle or squirted up the nose using a syringe.

Source of Supply

In the West Region, Mexican black tar is the heroin of choice, according to DEA's DMP and Federal, State, and local law enforcement and medical community data. Southeast Asian heroin is available in select cities, while Southwest Asian and South American retain relatively small niche markets in several cities. Much of the Southeast Asian, Southwest Asian, and South American heroin available in the West Region is destined for markets in the eastern United States.

- **Mexican** black tar heroin and, to a lesser extent, brown powder are readily available in all major cities. Street-level purity for both black tar and brown heroin varies according to city and trafficker, but has averaged approximately 30 percent over the past 3 years, ranging from a low of 7.3 percent in Dallas to a high of 57.6 percent in San Diego. While Mexican heroin at the wholesale level

sells for as low as $18,000 in Los Angeles and $25,000 in Seattle, generally the low is $40,000 elsewhere. The street-level price of a gram of Mexican heroin is as low as $80.

- **Southeast Asian** heroin is available in limited quantities in select cities throughout the region. The wholesale price of a kilogram of Southeast Asian heroin is as low as $85,000.
- **Southwest Asian** heroin is available in limited quantities in niche markets in the region. The wholesale price of a kilogram of Southwest Asian heroin is as low as $55,000.
- **South American** heroin is available in limited quantities at the street level in Houston and Los Angeles. South American heroin is transshipped through the region to markets in the eastern United States, with little to none remaining in the region. The wholesale price of a kilogram of South American heroin is as low as $50,000.

Trafficking

Mexican traffickers remain the key importers and distributors of heroin in the West Region, according to Federal, State, and local law enforcement reporting. They are being challenged by a number of different trafficking groups. A large number of heroin trafficking criminal enterprises are active in the region, principally ethnic Chinese, Middle Eastern, and Southwest Asian. African-American groups have been involved in distributing Southeast Asian heroin in the San Francisco–Oakland area. There are indications that Colombian traffickers are increasingly transiting Mexico and the Southwest border en route to the Northeast and North Central Regions.

Heroin enters the West Region by land, air, and sea. Heroin continues to cross at land ports of entry along the southwestern and, to a lesser extent, northern borders. Recent DEA investigations and law enforcement seizures reflect an increasing use of Mexico as a transshipment point for South American heroin destined for the United States. Seizures at the Southwest border increased from 52 events and 103.8 kilograms seized in 1997 to 80 events and 145.9 kilograms seized in 1998, according to Federal-wide Drug Seizure System data. Heroin is increasingly transshipped through border states like Texas to the eastern United States. Dallas, Houston, and El Paso are major transshipment points for heroin destined for Chicago and New York City. Trafficking heroin by airmail and courier continues in the region's airports at Oakland, Los Angeles, Houston, Dallas, El Paso, and Seattle. Seizures of Mexican heroin destined for Hawaii have been made at airports in California. Additionally, Federal law enforcement intelligence indicates that heroin shipped by maritime containerized cargo continues to enter ports at Los Angeles, San Francisco, Seattle, Houston, and Galveston. However, given the considerable volume of maritime cargo transiting these port facilities and the lack of resources to inspect every container, detection is difficult, even with the best of intelligence.

The Los Angeles area serves as the primary distribution hub in the West Region for black tar heroin. Significant quantities of black tar heroin are transported and consolidated in the Los Angeles metropolitan area before being distributed throughout the region. Heroin then is transported from Los Angeles to secondary distribution cities such as San Francisco, Seattle, Denver, and as far east as St. Louis.

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Appendix A: Demand Data Sources

The Monitoring the Future (MTF) Study: Conducted by the University of Michigan's Institute for Social Research and funded by research grants from the National Institute on Drug Abuse (NIDA), MTF is an annual survey of drug use frequency and related attitudes among eighth, tenth, and twelfth graders.

The National Parents' Resource Institute for Drug Education (PRIDE) Survey: The PRIDE survey presents data collected from sixth- through twelfth-grade students between September and June of each school year. Participating schools are sent a PRIDE questionnaire with explicit instructions for administering the anonymous, self-report survey. Schools that participate do so voluntarily or in accordance with a school district or State request.

The National Household Survey on Drug Abuse (NHSDA): Sponsored by SAMHSA, the NHSDA is an annual survey that provides estimates of the prevalence of use of a variety of illicit drugs, alcohol, and tobacco. The survey is based on a nationally representative sample of the civilian noninstitutionalized population aged 12 years and older; it covers residents of households, noninstitutional group quarters, and civilians living on military bases. The survey does not include homeless people who do not use shelters, active military personnel, or residents of institutional group quarters, such as jails and hospitals.

Arrestee Drug Abuse Monitoring (ADAM) Program: The National Institute of Justice established the Drug Use Forecasting (DUF) program in 1987 to gauge drug use trends in urban areas. ADAM, a modified version of DUF, was initiated in 1997. ADAM involves two components. The first is a questionnaire administered by a trained interviewer to an arrestee in a booking facility within 48 hours of arrest; the second is a urine sample collected from the respondent that is used to corroborate claims about recent drug use. Currently, data are collected at 35 ADAM sites.

The Drug Abuse Warning Network (DAWN) Emergency Department Data: Conducted annually by SAMHSA, DAWN is a national probability survey of hospitals with emergency departments. While DAWN data do not measure the prevalence of drug use in the population, they capture emergency department episodes that are induced by or related to the use of an illegal drug.

DAWN Annual Medical Examiner Data: Conducted annually by SAMHSA, DAWN medical examiner data include information on drug abuse deaths and the drugs mentioned in connection with the deaths reported by medical examiners participating in DAWN. In 1996, the most recent data available, 140 medical examiners in 40 metropolitan areas participated.

Treatment Episode Data Set (TEDS): The TEDS system comprises data on treatment admissions that are routinely collected by states to monitor their individual substance abuse treatment systems. TEDS minimum data set consists of 19 items collected by nearly all states: demographic information; primary, secondary, and tertiary substances; route of administration, frequency of use and age at first use; source of referral to treatment; number of prior treatment episodes; and service type, including planned use of methadone.

The Community Epidemiology Work Group (CEWG): Sponsored by the National Institutes of Health, NIDA, the CEWG is a network of researchers and epidemiologists from 21 major metropolitan areas in the United States who meet semiannually to discuss current and emerging substance abuse trends.

Appendix B: Heroin Consumption in the United States

The amount of heroin consumed in the United States is relatively unknown. Irregular consumption patterns and the unpredictability of addict populations preclude a precise calculation of consumption levels. However, data derived from drug treatment and law enforcement sources can be formulated into a consumption-based equation that yields a realistic estimate of domestic heroin consumption. This data includes the following information concerning the number of hardcore heroin addicts, dosage, and frequency of use.

- The current hardcore addict population in the United States is estimated to range between 750,000 and 1,000,000.[1] This estimate is based on an extrapolation from overdose deaths, number of applicants for treatment, and number of heroin addicts arrested. The most recent estimate of the domestic hardcore addict population is 980,000. This figure was derived from a 1999 study sponsored by the Office of National Drug Control Policy (ONDCP) designed to determine the expenditure habits of hardcore drug users in the United States. This study adopted the National Household Survey on Drug Abuse (NHSDA) and the Arrestee Drug Abuse Monitoring (ADAM) program definition of a hardcore addict as one who uses heroin more than 10 days in a month.
- An addict's use of heroin will fluctuate because of variations in personal and market conditions. The Treatment Episode Data Set (TEDS), which provides information on the demographic and substance abuse characteristics of individuals admitted to drug treatment programs, indicates that of the individuals in treatment for heroin abuse in 1996, 83.0 percent used daily, 4.0 percent used between three and six times a week, 1.8 percent used between one and two times a week, 2.2 percent used between one and three times a month, and 9.0 percent did not use during the month prior to their admission.
- Once addicted, each addict needs his or her own characteristic dose to keep from going into withdrawal. Withdrawal symptoms generally occur from 3 to 5 hours after an addict's last dose. Consequently, addicts must use heroin several times a day to avoid withdrawal.
- Addicts vary their heroin use depending on the time of day, the day of the week, and the other substances taken with the heroin.[2] Heroin addicts generally use the drug two to four times a day; however, more experienced users use more frequently, particularly at lower purity levels. As heroin use progresses, addicts develop a tolerance for the drug and must take higher doses more frequently to avoid withdrawal.
- An estimate of 50 mg of pure heroin a day was used as a realistic national average. This average daily amount is in all probability less than the requirements

1. Joel G. Hardman, Alfred Goodman Gilman, Lee. T. Limbird,. eds., *Goodman & Gilman's The Pharmacological Basis of Therapeutics*, 9th ed., (New York: McGraw Hill, 1996), 567.
2. Michael Agar, Philippe Bourgois, John French, and Owen Murduch, "Heroin Addict Size in Three Cities: Context and Variation," *Journal of Drug Issues* 28, no. 4, 1998: 921–940.

of many long-time addicts and considerably more than those of the increased number of younger, new users whose tolerance levels may still be relatively low. Many analysts and treatment professionals believe that the 50-mg daily heroin dose underestimates overall U.S. market demand.

- Hardcore heroin addicts do not account for all heroin consumption in the United States. Hardcore addicts consume approximately 75 percent of the heroin used in the United States, while occasional users—those who use less frequently than hardcore addicts—consume the remainder.[3]
- Other approaches using expenditure and supply data to estimate domestic heroin consumption have been developed. The expenditure approach estimates heroin consumption by multiplying the number of hardcore addicts by their admitted expenditures and then converting the result into kilograms of heroin, based on DMP price information. The supply approach estimates heroin consumption by valuing shipments of heroin to U.S. markets. Each approach estimates domestic heroin consumption using different variables, making comparison unreliable.

3. Office of National Drug Control Policy, *What America's Users Spend on Illegal Drugs, 1988–1995*, 1997.

Appendix C: Domestic Monitor Program

The Domestic Monitor Program (DMP) is a heroin purchase program designed to provide data on the purity, price, and origin of retail-level heroin available in the open-air drug markets in the major metropolitan areas of the United States. Each quarter, the DEA Intelligence Division's Special Field Intelligence Program provides funding for the undercover purchase of retail-level heroin in 23 metropolitan areas. Each heroin purchase subsequently undergoes chemical analysis to determine the purity, and if possible, the geographic source of the heroin.

The DMP was initiated in DEA's New York Field Division in 1979. From that time until 1991, the number of DEA offices that participated in the program fluctuated from six to twelve. Due to a manpower shortage in the DEA Special Testing and Research Laboratory, operation of the DMP was suspended from 1985 to 1987. In 1991, the DMP was expanded to include a DEA office from at least one city in all field divisions. The Baltimore District Office was included as a DMP participant in early 1995, and the Orlando Resident Office was included in late 1996.

Since its inception in 1979, the DMP has proven to be a valuable indicator for detecting trends in retail-level heroin trafficking. For example, in the early to mid-1980s, the DMP documented the increasing availability of Southeast Asian heroin at the retail level in a number of U.S. cities. More recently, data from the DMP have revealed significant increases in the amount of South American heroin available at the retail level, particularly in the metropolitan areas of the northeastern United States. In both instances, the DMP data, when combined with investigative intelligence and other indicators, provided DEA managers with information essential to determining how to most efficiently allocate DEA resources. It also assisted DEA to formulate and establish an overall heroin strategy.

The DMP is a retail heroin purchase program designed to identify the purity, price, adulterants, diluents, and source of origin of heroin sold at the retail level in 23 cities across the United States. Particular attention is paid to the DMP results for New York City because it is the nation's largest heroin market and because much of the heroin available in other cities is obtained in New York.

The DMP compares the purity of heroin purchased in the program with the price per milligram of pure heroin. (See Table.) High purity and low price indicate increased availability. Comparison of these two variables clearly demonstrates their utility as a barometer of heroin's increased availability in the open-air drug markets of major United States cities as reported by law enforcement, national surveys, and drug epidemiology and treatment specialists.

National Average Heroin Price and Purity 1980–1998

Year	Price per milligram pure (US$)	Purity (Percent)
1980	3.90	03.6
1981	3.14	06.5
1982	2.72	07.1
1983	2.89	06.9
1984*	3.56	06.9
1988	2.66	23.6
1989	1.79	25.2
1990	2.15	18.2
1991	2.17	26.6
1992	1.60	37.0
1993	1.47	35.8
1994	1.27	40.0
1995	1.04	39.7
1996	1.22	36.3
1997	1.11	38.4
1998	0.85	41.7

*DMP discontinued 1985–87 due to budget constraints.

Appendix D: Heroin Signature Program

The Heroin Signature Program (HSP) was initiated in 1977 by the Drug Enforcement Administration. The principal objective of the HSP is to enhance DEA's ability to identify the source of heroin seized and purchased within the United States from each of the world's major heroin source areas—Mexico, Southeast Asia, Southwest Asia, and South America.

The HSP is conducted at the DEA Special Testing and Research Laboratory (STRL). Through this program, heroin samples undergo in-depth chemical analysis and are classified according to the process by which they were manufactured. Each major heroin source area has a unique production process or "signature" which is used to determine the origin of the sample. The HSP is able to identify the source area for approximately 90 percent of the samples analyzed each year under the program. The STRL analyzed about 2,000 samples taken from the Domestic Monitor Program and other sources during 1998. In addition to identifying the heroin source area, the HSP provides intelligence on wholesale purity as well as information on tracking transitions in heroin smuggling patterns into and throughout the United States.

All heroin samples that meet the minimum weight requirement of one gram are eligible for selection. Samples under one gram are classified an insufficient sample (IS). Two categories for which a source cannot be determined are IS and unknown. The unknown classification indicates that a signature analysis was completed, but either the data did not match any known profile or the data provided conflicting results. Each sample undergoes three separate signature analyses. The source is identified if all three agree substantially; otherwise, the sample is classified as unknown.

Heroin samples are obtained from seizures made at U.S. ports of entry, from foreign sources, and from other HSP domestic seizures and purchases that are submitted to the DEA laboratory system. These include exhibits submitted by the DEA, U.S. Customs Service, Federal Bureau of Investigation, Immigration and Naturalization Service, and other law enforcement agencies. However, according to DEA's STRL, it receives samples from less than half of all USCS seizures, and only a very small number of INS seizures.

Signature analysis is the only scientific means currently available to determine the origins of heroin encountered in the U.S. drug market. HSP data are reported annually and provide the basis of percentages for both the number of seizures from each source area as well as the net weight of heroin seized from each area. The program is continually validated by associating source country authentic samples and intelligence reporting with the results of chemical analysis.

Data from the HSP must be used in conjunction with investigative intelligence and with drug production and seizure data to develop an overall assessment of the trafficking of heroin to and within the United States. Fluctuations from year to year in the proportion from each source area may reflect shifting law enforcement priorities, significant seizures, as well as changing patterns in distribution and consumption. For example, because HSP data are derived primarily from seizures, HSP findings may reflect law enforcement priorities, as in the numerous, small-quantity heroin seizures from Colombian as well as Nigerian air couriers. Moreover, large seizures of heroin from one source area may boost that source area's representation in the HSP.

DEA's HSP is based on samples derived from the following sources:

Airport Seizures. Seizures from boarding or deplaning passengers, luggage, or cargo, on flights that have originated outside the United States.

Border Seizures. Nonairport seizures by USCS or INS at ports of entry.

Foreign Seizures. Seizures submitted by foreign offices, the vast majority of which are from DEA international offices.

Mail Seizures. Seizures from letters, packages, or freight shipped by the U.S. Postal Service or a commercial mail or freight-forwarding company, which have originated outside the continental United States.

Other Nonairport Seizures. Seizures in Hawaii, Alaska, Puerto Rico, Guam, and U.S. territories.

Special Requests. Samples for which a special request for analysis has been received via the DEA Intelligence Division.

DEA Seizures. DEA evidence exhibits which have a DEA case number and are submitted through a DEA field office.

FBI Seizures. Exhibits submitted directly to a DEA laboratory for analysis.

Metropolitan Police Department Seizures. Seizures identified as evidence submitted by the Washington, D.C., Metropolitan Police Department.

Random Selection. Exhibits identified by a list of randomly selected numbers supplied to DEA Laboratories. The list of random numbers is provided by the DEA Domestic Strategic Intelligence Unit.

Heroin Signature Program Geographic Source Area Distribution
Percent of Net Weight Seized

Year	Mexico	Southeast Asia	Southwest Asia	South America
1977	89	9	2	
1978	82	15	3	
1979	48	13	39	
1980	38	11	51	
1981	36	10	54	
1982	34	14	52	
1983	33	19	48	
1984	32	17	51	
1985	39	14	47	
1986	42	22	36	
1987	42	25	33	
1988	29	46	25	
1989	27	56	17	
1990	21	56	23	
1991	21	58	21	
1992	10	58	32	
1993	8	68	9	15*
1994	5	57	6	32
1995	5	17	16	62
1996	20	8	20	52
1997	14	5	6	75
1998**	17	14	4	65

Source: DEA Intelligence Division, "Heroin Signature Program: 1999," July 1999.

* The signature for heroin from South America was developed in July 1993; therefore, this figure represents only partial-year data.

**Percentage based on samples for which a signature was identified. In 1998, 8% of samples were unclassified.

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